

OSTROVSKIY, V.Ye.; KARPOVICH, I.R.; KUL'KOVA, N.V.; TEMKIN, M.I.

Calorimeter for measuring the heats of chemisorption at elevated temperatures. Zhur. fiz. khim. 37 no.11:2596-2600 N'63.

(MIRA 17:2)

1. Fiziko-khimicheskiy institut imeni Karpova, Moskva.

NAKHMANOVICH, M.L.; MOROZOV, N.M.; BUADZE, L.G.; TEMKIN, M.I.

Kinetics of the catalytic exchange of deuterium between water vapor and hydrogen on various surfaces. Dokl. AN SSSR 148 no.6:1346-1349 F '63. (MIRA 16:3)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. Predstavleno akademikom N.M.Zhavoronkovym.
(Catalysis) (Water vapor) (Deuterium)

TEMKIN, M.I.

Kinetics of stationary reactions. Dokl. AN SSSR 152 no.1:156-159
S '63. (MIRA 16:9)

1. Predstavleno akademikom A.N.Frumkinym.
(Chemical reaction, Rate of)

SMIRNOV, I.A.; MOROZOV, N.M.; TEMKIN, M.I.

Kinetics of ammonia synthesis when the catalyst is poisoned by water vapor. Dokl. AN SSSR 153 no.2:386-389 N '63. (MIRA 16:12)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. Predstavleno akademikom N.M.Zhavoronkovym.

OSTROVSKIY, V.Ye.; KUL'KOVA, N.V.; KHALSON, N.S.; TEMKIN, M.I.

Kinetics of the oxidation of ethylene to ethylene oxide on a
selenium-promoted silver catalyst. Kin. i kat. 5 no.3:469-477
My-Je '64. (MIRA 17:11)

1. Fiziko-khimicheskiy institut imeni Karpova.

MOROZOV, N.M.; IUK'YANOVA, L.I.; TEMKIN, M.I.

Kinetics of ammonia synthesis on alloys of iron and cobalt.
Kin. 1 kat. 6 no.1:82-88 Ja-F '65.

(MIRA 18:6)

1. Fiziko-khimicheskiy institut imeni Karpova, Moskva.

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755220010-8

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CIA-RDP86-00513R001755220010-8

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755220010-8"

SHCHIBRYA, G.G.; MOROZOV, N.M.; TEMKIN, M.I.

Kinetics and mechanism of catalytic reaction between carbon
monoxide and water vapor. Part 1: Reaction on ferrochromium
oxide catalyst. Kin. i kat. 6 no. 6:1057-1068 N-D '65
(MIRA 19:1)

1. Fiziko-khimicheskiy institut imeni Karпова. Submitted
February 13, 1965.

SHCHIBRYA, G.G.; MOROZOV, N.M.; TEMKIN, M.I.

Kinetics and mechanism of a catalytic reaction between carbon monoxide and water vapor. Part 2: Reaction on a zinc-chromium copper oxide catalyst. Kin. i kat. 6 no. 6:1115-1117 N-D '65
(MIRA 19:1)

1. Fiziko-khimicheskiy institut imeni Karpova. Submitted February 13, 1965.

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CIA-RDP86-00513R001755220010-8"

TEMKIN, M.I.

Kinetic equations of complex reactions deduced by a graphic method. Dokl. AN SSSR 165 no.3:615-618 N '65. (MIRA 18:11)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova. Submitted April 22, 1965.

LEVITIN, S.G., inzh.; TEMKIN, M.S., inzh.

Problems of designing roll stabilizers with maneuverable
lateral fins before preliminary ship drawings. Sudostroenie
27 no.9:18-21 S '61. (MIRA 14:11)
(Stability of ships)

S/195/60/001/003/006/013
B013/B058

AUTHORS: Bykhovskiy, V. K., Temkin, O. N.

TITLE: On the Problem of the Mechanism of the Homogeneous Catalytic Activation of Monomolecular Hydrogen

PERIODICAL: Kinetika i kataliz, 1960, Vol. 1, No. 3, pp. 374 - 378

TEXT: With the aid of existing experimental material, the authors explained the problem of the mechanism of the homogeneous catalytic activation of molecular hydrogen with various catalysts. A transition state is suspected under participation of a loosening molecular orbit of the ligand (H_2) (dative bond). Some possible models of the transition state during the hydrogen activation were tested. The conception of the dominating significance of a donor-acceptor bond corresponds in the transition state to the complex $H^+ \cdots H_2$ or $H^+ \leftarrow H_2$. In this case the effects

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On the Problem of the Mechanism of the
Homogeneous Catalytic Activation of
Monomolecular Hydrogen

S/195/60/001/003/006/013
B013/B058

due to the possibility of a dative bond can be viewed on the following

models: $\begin{array}{c} \text{H} \\ \vdots \\ \text{H} \end{array}$ and $\begin{array}{c} \text{H} \\ \vdots \\ \text{H} \end{array}$ (dative bond with unpaired electron

or unshared electron pair respectively). In these particles bond energy and internuclear show a correlation with the order of bond (Table) so that certain conclusions may be drawn for complexes with unknown parameters, on the basis of the order of bond. The conditions of linkage, determined on models of transition complexes, confirm the supposition expressed and uncover a joint trend in the mechanism of activation of saturated and unsaturated molecules (H_2 , C_2H_2 , C_2H_4 etc.). This trend is tantamount to the participation of loosening molecular orbits, of the activated molecules and agrees with the experimental data on the reactions of these compounds. The proposed mechanism gives a satisfactory explanation for the difference in the catalytic activity of metal ions, for

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On the Problem of the Mechanism of the
Homogeneous Catalytic Activation of
Monomolecular Hydrogen

S/195/60/001/003/006/013
B013/B058

the effect of ligands as well as for the mechanism of activation
with particles of the type R^- , OH^- , NH_2^- etc. Thanks are expressed
to T. K. Rebane by the authors for discussing the study. Ya. K.
Syrkin and Kucherov are mentioned. There are 1 table and 28 refer-
ences: 12 Soviet, 8 US, 3 German, 1 Japanese, and 1 Swiss.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii
im. M. V. Lomonosova (Moscow Institute of Fine
Chemical Technology imeni M. V. Lomonosov).
Fiziko-khimicheskij institut im. L. Ya. Karpova
(Physicochemical Institute imeni L. Ya. Karpov) ✓

SUBMITTED: March 12, 1960

Card 3/4

S/195/60/001/003/006/013
B013/B058

Ком- плекс 1)	Порядок связи, p 2)	Энергия связи, eV 3)	Межъядер- ное рассто- яние, Å 4)	Лите- ратура 5)
H ₃ ⁻	0	—	—	—
H ₃ ⁺	1/2	2,73	1,07	(11)
H ₃ ⁻	1/2	2,4	0,88	(11)*
H ₃	1/3	—	—	—
H ₃ ⁺	1	4,74	0,74	(11)
H ₃ ⁺	2/3	—	—	—

Legend to the Table: characteristics of the model-complexes.
1) Complex; 2) order of bond; 3) bond energy, eV; 4) internuclear distance; 5) references.

Card 4/4

5.3400

77925
SOV/79-30-2-76/78

AUTHORS: Temkin, O. N., German, E. D., Flid, R. M.

TITLE: Letters to the Editor. The Part of Proton Acids in
Certain Catalytic Conversions of Acetylene

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2, p 699 (USSR)

ABSTRACT: The relation between metal ion activity in solution and
proton activity in the addition reactions of acetylene
was investigated. Hydration of acetylene was carried
out in contact solution containing $\text{Cu}_2\text{SO}_4 - \text{H}_2\text{SO}_4$. The
latter was prepared by boiling $\text{CuSO}_4 + \text{H}_2\text{SO}_4$ with metallic
copper in nitrogen. The concentration of CuSO_4 in all
cases was 0.0128 mole. It was established that con-
version of acetylene decreases with increase of the
acid concentration, caused by formation of copper
acetylides, until concentration of acid reaches 10%.
At this point, acetaldehyde is formed. Introduction
of the acetylene into solution decreases potential of

Card 1/2

Letters to the Editor. The Part of Proton
Acids in Certain Catalytic Conversions
of Acetylene

77925
SOV/79-30-2-76/78

the copper electrode from E_1 to E_2 . Passing nitrogen through the contact solution increases this potential to a value smaller than E_1 . It was established that the termination of the formation of acetylides and the maximum concentration of acetaldehyde takes place at a definite ratio of potential to proton activity. There are 5 Soviet references.

Card 2/2

TEMKIN, O.N.; FLID, R.M.; GERMAN, E.D.; ONISHCHENKO, T.A.

Soluble complexes of unsaturated hydrocarbons with metal salts,
and their role in catalytic reactions. Part. 1: Soluble compounds
of acetylene with copper salts. Kin. 1 kat. 2 no.2:205-213 Mr-Ap
'61. (MIRA 14:6)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni
M.V. Lomcnosova.

(Copper compounds)
(Acetylene compounds)

FLID, R.M.; TEMKIN, O.N. (Moscow)

Kinetics and mechanism of catalytic transformations of acetylene.
Part 5: Certain problems in selecting catalysts for the liquid
phase hydration of acetylene. Zhur. fiz. khim. 35 no.2:452-
459 P '61. (MIRA 16:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni
Lomonosova.
(Acetylene) (Hydration) (Catalysts)

S/195/62/003/006/011/011
E075/E436

AUTHORS: Temkin, O.N., Flid, R.M., Malakhov, A.I.

TITLE: Soluble complexes of unsaturated hydrocarbons with metal salts and their role in catalytic reactions
II. Soluble compounds of acetylene with silver salts

PERIODICAL: Kinetika i kataliz, v.3, no.6, 1962, 915-919

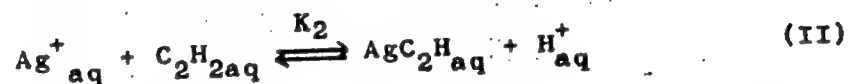
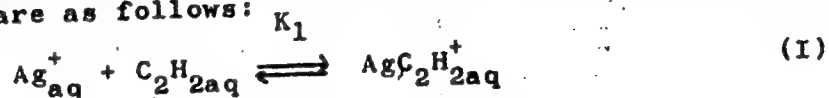
TEXT: In connection with the studies of the mechanism of hydration of acetylene in silver salt solutions, it becomes necessary to elucidate the possibility and conditions for the formation of the π -complex. The thermodynamics of the complex formation were investigated by a potentiometric method (Kinetika i kataliz, v.2, 1961, 205). The silver electrode was prepared by depositing Ag on a platinum spiral at the current density of 0.003 A/cm² and was immersed in aqueous 1 to 7 M H₂SO₄. As acetylene was passed through the solutions, the electrode potential decreased irreversibly (ΔE_1) and reversibly (ΔE_2). As ΔE_1 was related to the formation of Ag₂C₂. ΔE_2 decreased with the increasing concentration of H₂SO₄, but increased and passed through a maximum with increasing temperature (from 20 to 100°C)

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E075/E436

Soluble complexes ...

in 0.288 M H₂SO₄. This indicated that a soluble half-acetylide HC≡C₂Ag formed in addition to the π-complex. The reactions taking place are as follows:



The enthalpy values for reactions I and II are -13.20 and +6.86 respectively. Low catalytic activity of silver salts in the hydration process in comparison with that of copper salts is explained by low values of K_1 [K_1 (373°C) = 0.6 litre/mole] compared with the corresponding value for Cu (20 litres/mole). The strong tendency to acetylide interaction prolongs the formation of the halfacetylide. Moreover high acidities (6 to 7 M H₂SO₄) necessary for decreasing the acetylide interaction, cause a strong dehydration of the π-complex, which

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Soluble complexes ...

S/195/62/003/006/011/011
E075/E436

makes the hydration of acetylene more difficult. There are
6 figures and 2 tables.

ASSOCIATION: Institut tonkoy khimicheskoy tekhnologii
im. M.V.Lomonosova (Institute of Fine Chemical
Technology imeni M.V.Lomonosov)

SUBMITTED: October 16, 1961

Card 3/3

TEMKIN, O.N.; FASMAN, A.B.; DURGAR'YAN, S.G.; ROZOVSKIY, A.Ya.

Conference on the catalytic reactions in the liquid phase. Kin.i kat.
4 no.1:168-174 Ja-F '63. (MIRA 16:3)
(Catalysis--Congresses)

TEMKIN, O.N.; FLID, R.M.; MALAKHOV, A.I.

Soluble complexes of unsaturated hydrocarbons with metal salts and their role in catalytic reactions. Part 3: Soluble π -complexes of mercury (II) with acetylene. *Kin. i kat.* 4 no. 2: 270-276 Mr-Ap '63. (MIRA 16:5)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.
(Mercury organic compounds) (Acetylene compounds)
(Catalysis)

MOGILYANSKIY, A.I.; TEMKIN, O.N.; FLID, R.M.; BUNINA, R.V.

Potentiometric determination of divalent mercury concentration
using a mercury electrode. Zhur.anal.khim. 18 no.10:1211-1216
O '63. (MIRA 16:12)

1. M.V.Lomonosov Moscow Institute of Fine Chemical Technology.

TEMKIN, O.N.; GINZBURG, A.G.; FLID, R.M.

Soluble complexes of unsaturated hydrocarbons with metal salts and their role in catalytic reactions. Part 4: Thermodynamics of the formation of soluble π -complexes of ethylene with Ag^+ and Cu^+ ions. Kin. i kat. 5 no.2:221-227 Mr-Ap '64. (MIRA 17:8)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

GRIGOR'YEV, V.A., kand. tekhn. nauk; KOLACH, T.A., dots.;
SOKOLOVSKIY, V.S., assistant; TEMKIN, R.M., inzh.;
LEBEDEV, P.D., doktor tekhn. nauk, prof., red.;
ANTIKAYN, P.A., red.; BORUNOV, N.I., tekhn. red.

[Concise manual on heat exchangers]Kratkii spravochnik po
teplobmennym apparatam. By V.S.Grigor'ev i dr. Pod red.
P.D.Lebedeva. Moskva, Gosenergoizdat, 1962. 255 p.
(MIRA 15:9)

(Heat exchangers)

TEMKIN, R.S., inzh.

Use of mine electric locomotives for intrafactory conveying
of clay brick. Stroi.mat. 8 no.1:30 Ja '62. (MIRA 15:5)
(Electric locomotives)

"APPROVED FOR RELEASE: 07/16/2001

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755220010-8"

TEMKIN, S. Ye.

PA 19T15

USSR/Radio Waves - SHF
Oscillators, Electric

Jun/Jul 1946

"Measuring the Power of Oscillators in the Decimeter and Centimeter Wave Bands,"
Engrs M, I. Karpovskiy, S. Ye. Temkin, Ye. D. Naumenko, 8pp

"Radiotekhnika" Vol I, No 3/4

The load on an oscillator is the wave impedance of a line with a propagating wave, reduced by an impedance transformer to a certain magnitude. The power is measured over a section of the line with propagating voltage wave. A design for an impedance transformer is suggested.

TEMKIN, S.YE.

109-8-11/17

AUTHORS: Temkin, S.Ye. and Krolevets, K.M.

TITLE: The Effect of Temporary Deterioration of the Rectifying Characteristics of Crystal Diodes during their Work at High Frequencies. (Effekt vremennogo ukhudsheniya detektiruyushchikh svoystv kristallicheskikh diodov pri rabote ikh na vysokikh chastotakh)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol. II, Nr 8, pp. 1062-1070 (USSR)

ABSTRACT: A number of experimental investigations were carried out on point contact semi conductor diodes at microwaves. The measuring equipment (shown in Fig. 1) consists of an ultra high frequency generator producing pulses of 5 W output power; the pulses have a duration of 1 microsec and a repetition frequency of 1000 c/s. Altogether 100 different detector diodes were measured. It was found that if a diode is subjected to the action of short, powerful pulses (as in the equipment of Fig. 1), the rectified current gradually decreases. The process takes several tens of secs and reaches a steady state value. When the pulsing is interrupted the diode recovers and after a few minutes its characteristic returns to the original value. This type of deterioration is reversible and quantitatively

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109-8-11/17

The Effect of Temporary Deterioration of the Rectifying Characteristics of Crystal Diodes during their Work at High Frequencies.

it can be represented by a ratio $\frac{J_1 - J_2}{J_1}$ where J_1 is

the rectified current at the inception of the experiment and J_2 is the steady state current after the deterioration. The experimental results are shown graphically in Figs.2 to 10. An attempt is made to explain the mechanism of the process. It is thought that the effect can be explained by assuming that in the near-contact area of a silicon detector, there exist some capturing centres which can capture the electrons and thus form negative ions. The capturing centres form a space charge in the region of the barrier layer, which leads to a decrease in the thickness of the barrier layer and ultimately, to the deterioration of the rectifying properties of the diode, due to the effective increase of the capacitance of the barrier. After the disappearance of the pulse a process of deionization of the capturing centres takes place and the detector

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109-8-11/17

The Effect of Temporary Deterioration of the Rectifying Characteristics of Crystal Diodes during their Work at High Frequencies.

returns to its original state. There are 11 figures and 4 references, of which 1 is Slavic.

SUBMITTED: April 5, 1956.

AVAILABLE: Library of Congress.

Card 3/3

PHASE I BOOK EXPLOITATION

SOV/4223

Temkin, Solomon Yefimovich

Impul'snyye modulyatornyye lampy (Pulse Modulator Tubes). Moscow, Voenizdat M-va obor. SSSR, 1960. 90 p. (Series: Radio-lokatsionnaya tekhnika). No. of copies printed not given.

Ed.: V. T. Vladimirov, Engineer-Colonel; Tech. Ed.: R. F. Anikina.

PURPOSE: This booklet is intended for military officers engaged in radio engineering. It may also be used by the general reader interested in radar.

COVERAGE: The booklet describes the purpose, principle of action, arrangement and utilization of powerful pulse modulator tubes and hydrogen thyratrons. Considerable attention is paid to the correct operation and reliability of the tubes. Problems concerning the joint operation of tubes and other components of the modulator circuit are reviewed. Physical processes related to the stability of tube operation are examined in detail. No personalities are mentioned. There are 7 Soviet references.

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SOV/4223

Pulse Modulator Tubes

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Pulse Modulator Tubes

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Bibliography

91

AVAILABLE: Library of Congress

Card 3/3

JP/dwm/ec
9-16-60

USSR / General Biology. Genetics.

B-5

Abs Jour : Ref Zhur - Biol., No 12, 1958, No 52447

Author : Tenkin, V. I.

Inst : Not given

Title : Experimental Vegetative Hybridization of Peas.

Orig Pub : Agrobiologiya, 1957, No. 2, 65-69

Abstract : The behavior of grafts and their descendants was studied in using as the graft components pea varieties differing in length of vegetative period, flower color, seed color and shape, and other characteristics. Genetic analysis of the experimental data and statistical treatment of the results obtained are not included.

Card 1/1

GAYSENOK, A.A., otv.red.; TEMKIN, Ya.G., otv.red.; GLOZMAN, M.K., otv.
red.; MISHKEVICH, G.I., red.; STOLYARSKIY, L.L., red.; FRUMKIN,
P.S., tekhn.red.

[How they built the atomic icebreaker "Lenin"] Kak byl postroen
atomnyi ledokol "Lenin." Leningrad, Gos.soluzhnoe izd-vo sudo-
stroit.promyshl., 1959. 62 p. (MIRA 13:3)

1. Admiralteyskiy sudostroitel'nyy zavod (for Gaysenok, Temkin,
Glozman).

(Lenin (Atomic ship))

TEMKIN, YA. S.

"Review of 'Collection of Works of the Ukrainian Otorhinolaryngological Institute
and the Otorhinolaryngological Clinic, Kharkov Medical Institute, Vol. III,'"
Vest. Oto-Rino-Laringol., No. 3, 1947.

TEMKIN, V. A. S., ed.

Surge y in diseases of the noses, nasal sinuses, and nasopharynx; doctor's manual.
Moskva, Medgiz, 1949. 618p. (50-56582)

RF51.T4

1. Nose - Diseases. 2. Nose - Surgery

TERKIN, Ya. S.

"L. I. Sverzhhevskiy--Founder and Director of the Soviet Clinical School, 1949-1951", Vest.
Oto-rino-laringol, No. 1, 1949, Prof.

TEMKIN, Ya. S.

YERMOLAYEV, V.G., redaktor; PREOBRAZHENSKIY, B.S., redaktor; RUTENBURG, D.M., redaktor; TEMKIN, Ya.S., redaktor; ALEKSEANDROV, I.N., redaktor; NEYMAN, L.V., redaktor; GABERLAND, M.I., tekhnicheskii redaktor

[Diseases of the pharynx, larynx, trachea, bronchi, and esophagus necessitating surgery; doctors' handbook] Khirurgicheskie bolezni glotki, gortani, trachei, bronkhov i pishchevoda; rukovodstvo dlia vrachei. Pod red. V.G.Yermolaeva, B.S.Preobrazhenskogo, D.M.Rutenburga i I.A.S.Temkina. Moskva, Gos. izd-vo med. lit-ry, 1954. 867 p.

(MLA 7:9)

(Throat--Surgery)

(Respiratory organs--Surgery)

(Esophagus--Surgery)

TEMKIN, Ya.S., professor (Moscow).

Intramucous nasal novocaine block as a method of reflex influence
in certain pathological conditions. Vest.oto-rin. 16 no.1:23-29
Ja-P '54. (MIRA 7:3)
(Novocaine)

TEMKIN, Ya.S.

[Acute otitis and its complications] Ostryi otit i ego os-
lozhneniia. Izd. 2. Moskva, Medgiz, 1955. 200 p.
(Ear--Diseases) (MIRA 8:9)

TEMKIN, Ya.S., professor, redaktor; MEDVEDEV, N.N., redaktor; BELMVA, M.A.,
tekhnicheskiiy redaktor

[Problems of the pathogenesis, clinical aspects and treatment of
deafness; a collection of surveys, and abstracts of abridged
translations, foreign periodicals] Voprosy patogeneza, kliniki i
lecheniia glukhoty; sbornik skorashchennykh perevodov, obzorov i
referatov inostrannoi periodicheskoi literatury. S predisl. I.A.S.
Temkina. Moskva, Izd-vo inostrannoi lit-ry, 1955. 205 p. (MLRA 9:8)
(DEAFNESS)

EXCERPTA MEDICA Sec.11 Vol.10/6 Oto-Rhino-Laryngo Jun>/
TEMKIN Ya. S.

1249. TEMKIN Ya. S. and SHEIKHON F.D. Moscow. "The role of the CNS in the manifestations of auditory adaptation (Russian text) VESTN. OTO-RINO-LARING. 1955, 5 (23-30) Illus. 2

In order to throw light on the role of the CNS in the phenomena of adaptation of hearing, study was made of the influence of bromide and of caffeine on the processes of adaptation. Caffeine reduces the adaptation and shortens considerably the recovery time of the auditory acuity. Particularly striking was the effect of caffeine in patients with slowly recovering basic auditory acuity (acoustic neuritis, acute purulent otitis media). With bromide the auditory excitability was lowered, the adaptation was increased and the time of recovery of the auditory acuity prolonged. Repeated administration of bromide gives a smaller effect and sometimes no effect at all. If bromide is given after the prior caffeine administration, the action of the bromide is enhanced. Given simultaneously, bromide and caffeine restore the adaptation processes to normal.

Preobrazhenski - Moscow

TEMKIN, Ya.S., professor

Professor Evgenii Mikhailovich Stepanov; 100th anniversary of his
birth. Vest. oto-rin. 17 no.6:59-63 N-D '55. (MLRA 9:2)

(BIOGRAPHIES,
Stepanov, Evgenii M.)

TEMKIN, Ya.S.

[Deafness and difficulty in hearing] Glukhota i tugoukhost'.
Moskva, Medgiz, 1957. 426 p. (MIRA 10:11)
(DEAFNESS)

TEMKIN, I.S.

TEMKIN, Yu.S., prof. (Moskva)

Current tasks in practical audiology [with summary in English]. Vest.
oto-rin. 19 no.5:32-41 S-O '57. (MIRA 10:11)
(HEARING
progr. in audiology in Russia)

LUKOV, B.N., prof. (Kuybyshev); PETROV, V.I., dotsent (Moskva);
 PAVLENKO, T.M., aspirant (Moskva); YERMOLAYEV, V.G., prof.
 (Leningrad); ADO, A.D., prof.; VOVSII, M.S., prof.;
 YERMOLAYEV, V.G., prof. (Leningrad); KUPRIYANOVA, N.A. (Kazan');
 PETROV, G.I. (Moskva); DOLGOPOLOVA, A.V. (Moskva); SAKHAROV, P.P.,
 prof.; BYKHOVSKIY, Z.Ye., prof.; MIN'KOVSKIY, prof. (Chelyabinsk);
 KHMEL'CHONOK, I.P. (Irkutsk); TEMKIN, Ya.S., prof. (Moskva);
 MIN'KOVSKIY, A.Kh., prof. (Chelyabinsk); MIL'SHTEYN, T.N., doktor
 med.nauk (Leningrad); TRUTNEV, V.K., zaslužhenny deyatel' nauki,
 prof.; TSYRESHKIN, B.D., kand.med.nauk (Moskva); SOBOL', I.M.,
 prof. (Stavropol'); TURIK, G.M. (Moskva); FRENKEL', M.M. (Moskva);
 MAZO, I.L.; POKRYVALOVA, K.P.; PROSKURYAKOV, S.A., prof.;
 ATKARSKAYA, A.A., prof.; GOL'DFARB, I.V., prof. (Izhevsk);
 PORUBINOVSKAYA, N.M. (Moskva); RUDNEV, G.P., prof.; VOLIFSON, I.Z.,
 prof. (Stalingrad); DOROSHENKO, I.T., prof. (Kalinin);
 ROZENFEL'D, M.O., prof. (Leningrad); SHUL'GA, A.O., prof. (Orenburg);
 MIKHLIN, Ye.G., prof.; TRET'YAKOVA, Z.V. (Moskva); MANUYLOV, Ye.N.,
 prof. (Moskva); DOROSHENKO, I.T., prof. (Kalinin); YERMOLAYEVA, V.G.,
 prof.

Speeches in the discussion. Trudy gos. nauch.-issl. inst. ukha,
 gorla i nosa no.11:79-87,129-146,179-186,233-248,311-333 '59.
 (MIRA 15:6)

1. Chlen-korrespondent AMN SSSR (for ADO). 2. Direktor Moskov-
 skogo gosudarstvennogo instituta ukha, gorla i nosa (for Trutnev).
 (OTORHINOLARYNGOLOGY—CONGRESSES)

TEMKIN, Ya.S.; KUBLANOVA, P.S.

Effect of industrial vibrations on the vestibular function. Uch.
zap. Mosk.nauch.-issl.inst.san. i gig. no.7:66-73 '60. (MIRA 15:2)
(VESTIBULAR APPARATUS)
(VIBRATION PHYSIOLOGICAL EFFECT)

TEMKIN, Ya.S.

Pathogenesis and clinical aspects of vibratory cochleovestibular disorders. Vest.otorin. 22 no.3:5-15 My-Je '60.

(MIRA 13:10)

(VESTIBULAR APPARATUS—DISEASES)
(VIBRATIONS—PHYSIOLOGICAL EFFECT)

TEMKIN, Ya.S., prof.; KUBLANOVA, P.S., kand.med.nauk

Significance of vibrations in industrial production in the
pathogenesis of occupational deafness. Zhur. ush., nos. 1
gorl. bol. 20 no.6:66-70 N-D '60. (MIRA 15:2)

1. Iz klinicheskogo otdela (zav. -- kand.med.nauk V.S.Luk'yanov)
Nauchno-issledovatel'skogo instituta sanitarii i gigiyeny imeni
F.F.Erismana.

(INDUSTRIAL PLANTS--VIBRATION)
(OCCUPATIONAL DISEASES) (DEAFNESS)

TEMKIN, Ya. S.

Professor Arkadii Arkad'evich Bekritskii on his 80th birthday.
Vest. otorin. no.5:119 '61. (MIRA 14:12)

(BEKRITSKII, ARKADII ARKAD'EVICH, 1881-)

TEMKIN, Ya.S., prof. (Moskva)

Unification of methods of clinical hearing examination and
standardization of the graphic presentation of its results.

Vest.otorin. 23 no.1:21-30 Ja-F '61.

(MIRA 14:2)

(HEARING—TESTING)

UNDRITS, V.F., prof.; TEMKIN, Ya.S., prof.; NEYMAN, L.V., prof.;
VOLKOV, Yu.N., red.; KUZ'MINA, N.S., tekhn. red.

[Manual of clinical audiology] Rukovodstvo po klinicheskoi audio-
logii. Moskva, Medgiz, 1962. 323 p. (MIRA 16:1)
(EAR--DISEASES) (AUDICMETRY)

D'YACHKOV, A. I.; RAU, F. F.; TEMKIN, Ya. S.; FILIPPOV, M. M.

Doctor of medical sciences Lev Vladimirovich Neiman; on his 60th
birthday. Vest. otorin. no.3:111-112 '62. (MIRA 15:6)

(NEIMAN, LEV VLADIMIROVICH, 1902-)

TEMKIN, Ya.S.; KUBLANOVA, P.S.

Cochleovestibular disorders during the prolonged effect
of industrial ultrasound. Uch. zap. Mosk. nauch.-issl.
inst. san. i gig. no.11:41-50 '63. (MIRA 17:1)

TEMKIN, Ye. N.

Protection of electric motors against operation on two phases.
Khol. tekhn. 42 no. 4:57-60 31-Aug '65. (MIRA 18:9)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy
rybnoy promyshlennosti.

TEMKIN, Ye. Ya.

Treatment of acute male gonorrheal urethritis with penicillin associated with citrated autohemotherapy with novocaine. Vest. vener., Moskva no.2:56-57 Mar-Apr 1952. (CML 22:2)

1. Of Tashkent Medical Institute.

TEMKIN, Z.A. (g. Termez Uzb.SSR.)

Pharmacy work. Apt. delo 3 no.6:30-32 N-D '54.

(MLRA 8:2)

(PHARMACY,
in Russia, organiz.)

RIMMER, I.M., TEMKIN, Z.A., KLIMENKO, N.S. (Pechenga, Murmanskoy oblasti)

Period of safe utilization of sterile dosage forms prepared in
a pharmacy for parenteral administration. Apt.delo 7 no.5:65-67
S-O '58 (MIRA 11:10)

(DRUGS--PRESERVATION)

TROKSKAYA, Z.I.; TEMKIN, Z.Ye.; KHETAGUROV, G.D., kand. tekhn. nauk

Quality of nonferrous metal ores and the profitability of
their production; discussion of the article by B.F. Novozhilov.
Gor. zhur. no.11:7-11 N '63. (MIRA 17:6)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy
tavetnoy metallurgii, Moskva (for Trokskaya, Temkin).
2. Sredneaziatskiy filial Gosudarstvennogo nauchno-issledova-
tel'skogo instituta tavetnykh metallov, Almalyk (for Khetagurov).

TEMKINA, A.A.; RUBAKHINA, N.N.; NOVIKOVA, N.N.; KVASOVA, E.I.; MOROLOVA, V.V.

Rapid method for determining low molecular compounds in polycaprolactam. Khim.volok. no.6:54-55 '61. (MIRA 14:12)

1. Barnaul'skiy zavod.

(Azepinone)

TEMKINA, A.A.; ZHUKOVA, S.A.

Oiling preparation for capron fiber. Khim.volok. no.1:66-68
'63. (MIRA 16:2)

(Nylon)

(Finishes and finishing)

TEMKINA, A.A.; NOVIKOVA, G.V.

Determination of the content of acetic butylamine in a
caprolactam melt. Khim.volok. no.1:74 '63. (MIRA 16:2)

1. Barnaul'skiy zavod.

(Butylamine)

(Azepinone)

TEMKINA, A.I.

Rapid drop method for determining iron and manganese content
of photographic developers. Zhur. nauch. i prikl. fot. i
kin. 8 no.4:308 J1-Ag '63. (MIRA 16:7)

1. Moskovskiy poligraficheskii institut.
(Photography—Developing and developers)

TEMKINA, B.

Nickel armor. Znan.sila 35 no.1:24 Ja '60.
(Diffusion coatings) (Nickel) (MIRA 13:5)

TEMKINA, B. S.

USSR/Geophysics - Prospecting

Sept/Oct 53

"Review of Symposium 'Prospecting and Industrial Geophysics,'" (A. G. Ivanov, reviewer)

Iz Ak Nauk SSSR, Ser Geofiz, No 5, pp 474-476

Favorably reviews the symposium, edited by V. V. Fedynskiy, entitled "Razvedochnaya i promyslovaya geofizika", No 4, Min Petrol Ind USSR, Glavneftgeofizika, Moscow, 1952, 600 copies, price 1.50 rubies. Contributors were: I. K. Kupalov-Yaropolk, G. V. Bereza, A. I. Slutskovskiy, B. S. Temkina, P. I. Lukavchenko, O. A. Shvank, N. A. Per'kov, S. G. Komarov, I. Ye. Eydman, L. M. Yesel'son, and E. E. Fotiadi.

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77 11/11/11 210
TEMKINA, B.S.; YEZUPOV, F.I.

Data on the theory of resistivity logging obtained as the result
of a grid model. Prikl.geofiz..no.11:72-91 '54. (MIRA 8:10)
(Oil well logging, Electric)

TEMKINA, B.Ya.

BAKHVALOV, Grigoriy Tikhonovich; RYMYANTSEV, Nikolay Vasil'yevich; TEMKINA, B.Ya. red.; SUKHAREVA, R.A., tekhn.red.

[Electric metal plating by using reversible current] Elektroliti-
cheskoe pokrytie metalla pri reversivnom toke. Moskva, Mosk. dom
nauchno-tekhn.propagandy im. F.E.Dzerzhinskogo, 1957. 45 p.

(MIRA 10:12)

(Electroplating)

VISHENKOV, Semen Arkad'yevich; MEL'NIKOVA, M.M., red.; TEMKINA, B.Ya.,
otv. za vypusk; SUKHAREVA, R.A., tekhn.red.

[Increasing the wear resistance of parts by chemical nickel
coating] Povyshenie iznosostoikosti detalei khimicheskim nikel-
rovaniem. Moskva, 1959. 59 p. (Moskovskii Dom nauchno-tekhn-
cheskoi propagandy. Peredovoi opyt proizvodstva. Seria: Progres-
sivnaia tekhnologiya mashinostroeniia, vyp.5) 59 p. (MIRA 13:9)
(Protective coatings) (Nickel plating)

S/191/60/000/0-0/016/017
B004/B060

AUTHOR:

~~Tenkina, B. Ya.~~

TITLE:

Experience of the Moskovskiy dom nauchno-tekhnicheskoy
propagandy im. F. E. Dzerzhinskogo (Moscow House for
Scientific and Technical Dissemination imeni F. E.
Dzerzhinskiy)

PERIODICAL: Plasticheskiye massy, 1960, No. 10, pp. 73-76

TEXT: A section for the chemical industry and plastics was established
in 1956 at the Moscow House for Scientific and Technical Dissemination.
The section is guided by M. I. Garbar. Among its members totaling over
250 are researchers, experts of scientific research institutes, engineers
and technicians of Moscow factories. The NII Plasticheskikh mass
(Scientific Research Institute of Plastics) has a leading part in this
section, and its director M. S. Akutin supervises the seminars. The first
seminar "Plastics in Machine Construction" was held in March-April, 1957.
Over 5000 persons attended 17 sessions. On exhibition were products made
of new plastics, as well as literature on plastics. The following

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lectures are mentioned. "Epoxy Resins in Machine Construction" (M.S. Akutin);
"Novel Methods of Producing Punches and Models of Epoxy Resins"
(B. S. Gracheva); "Application of New Types of Nitrogen-containing
Plastics in Machine Building" (L. M. Pesin); "Resins for Casting Molds
in Foundry Works" (N. V. Shorygina); "Pressed Materials of the Phenolit
and Decorosit in Machine Building" (L. V. Pevzner); "High-stability
Pressed Materials of the ФВП (FKP) Type in Machine Building" (S.M. Rabits);
"Fluoropolymers and Their Range of Application in Machine Building"
(V. N. Kotrelev); "Building Loams as a Substitute for Lead - Tin Solder
in the Soldering of Joints in Machine Building" (G. S. Brodskiy);
"Application of Polyamide Materials in Machine Building" (K. N. Vlasova);
"Methods of Processing Plastics Into Finished Products" (M. G. Gurariy);
"Device for the Semiautomatic Control of Hydraulic Presses with Series
Drive" (V. K. Zavgorodniy); "Situation of Plastics Abroad" (M.I. Garbar);
"Ornamental Laminated Plastics Abroad" (V. N. Gorbunov); "Use of Organo-
silicon Plastics in Machine Building" (V. I. Pakhomov); "Glass Reinforced
Plastics and Their Application in Machine Building" (P. Z. Li); "Modern

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Experience of the Moskovskiy dom nauchno-
tekhnicheskoy propagandy im. F.E. Dzerzhinskogo
(Moscow House for Scientific and Technical
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B004/B060

Building of Molds for the Manufacture of Units From Plastics"
(M. P. Shapenkov). Among those participating in the discussion were
N. S. Morozov, V. P. Perepelkin, V. K. Zavgorodniy, M.M. Sukhebokova,
I. M. Epshteyn, I. I. Mikhalev, Ya. D. Avrasin, L. V. Popova, A. K.
Vardenburg, N. F. Gusev, L. B. Azar'yan, L. M. Bernshteyn, A. V.Koval'skaya,
L. G. Petrova, I. Ya. Al'shits, K. N. Strel'tsov, M. S. Krichevskiy. The
seminar was followed by a four-month cycle of lectures on the subject:
"Machinery for the Processing of Plastics Into Finished Products by Way
of Pressing and Casting Under Pressure". Lectures on the subject were
delivered by A. M. Levin, V. A. Veselov, V. K. Zavgorodniy, V.V.Lapshin,
B. M. Notkin, N. S. Morozov, P. V. Izrailev. Since there is little
available in the literature concerning the use and processing of plastics,
the section has published a compendium "Plastmassy v mashinostroyenii"
which appeared in 1959. Following the plenary meeting of the TsK KPSS
(Central Committee of the Communist Party of the USSR) in May of 1958 the
section jointly with the Scientific Research Institute of Plastics and
VDNKh SSSR (Exposition of the Achievements of National Economy in the USSR)

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Experience of the Moskovskiy dom nauchno- S/191/60/000/010/016/017
tekhnicheskoy propagandy im. F.E. Dzerzhinskogo B004/B060
(Moscow House for Scientific and Technical
Dissemination imeni F. E. Dzerzhinskiy)

held a second seminar on "Use of Plastics in Machine- and Instrument Construction". Lectures were delivered by M. S. Akutin, V.N. Kotrel'skiy, L. V. Pevzner; other reports dealt with the experience gathered with antifriction material at the Moskovskiy tormoznyy zavod (Moscow Brake Works) Zubonosov; other lecturers were K. M. Saldadze, N.V. Andrianova, M. A. Stal'nova, Z. S. Utyanskiy, P. Z. Li, L. B. Azar'yan, A. N. Nikolayev, Ye. G. Prokopenko, V. V. Lapshin, M. P. Shapenkov, Yu. M. Ivanov, G. A. Khotmakher, Yranchkova, et al. An exposition "Plastics in Machine Construction" was also organized. Furthermore, a number of lectures on chemistry was delivered by I. P. Losev, A. B. Davankov, N. Ye. Ogneva, I. V. Kamenskiy, A. A. Berlin jointly with the AN SSSR otdeleniye khimicheskikh nauk (AS USSR Department of Chemical Sciences), the MKhTI im. Mendeleyeva (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev), and the Scientific Research Institute of Plastics. Seminars were also held on "Use of Polymers in the Food Industry", "Manufacture of Punches and Models of Plastics", "Artificial and Synthetic Fibers", "Use of Plastics in the Manufacture of Machine Tools". "Use of Plastics in

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Experience of the Moskovskiy dom nauchno- S/191/60/000/010/016/017
tekhnicheskoy propagandy im. F.E. Dzerzhinskogo B004/B060
(Moscow House for Scientific and Technical
Dissemination imeni F. E. Dzerzhinskiy)

Construction". In view of the fact that the Moscow Center was not in a position to serve all the parties concerned, the first Vsesoyuznyy zaochnyy seminar (All-Union Correspondence Seminar) was held on the subject "Use of Plastics in the Machine and Instrument Construction". In the time from April to May, 1960 a number of lectures was delivered on the subject "Electrical Insulators, Plastic Compounds, and Impregnating Mixtures" held by A. V. Vardenburg, R. S. Kholodovskaya, K. I. Zabyrina, V. A. Koval'skaya, M. A. Stal'nova, L. A. Rodivilova, L. B. Azar'yan, Ye. I. Fridman, L. M. Bernshteyn. Now being prepared is the edition of a second compendium "Plastics in Machine Building", 32 printed sheets, which comprises the subjects dealt with by the correspondence seminar and other lectures. For 1961, it has been planned to hold special seminars, to improve the correspondence seminars, to enlarge the exposition, to continue with the lectures on chemistry, and to promote the exchange of experience among industrial plants. There is 1 figure. ✓

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S/191/60/000/010/017/011
B004/BG60

AUTHOR: Temkina, B. Ya.

TITLE: Seminar on Welding of Plastics

PERIODICAL: Plasticheskiye massy, 1960, No. 10, pp. 76-78

TEXT: The author reports on the material of the Seminar on the welding of plastics which took place at the Moskovskiy Dom nauchno-tekhnicheskoy propagandy im. F. E. Dzerzhinskogo (Moscow House of Scientific and Technical Dissemination imeni F. E. Dzerzhinskiy) in June, 1960. An experience exchange was made, and results obtained by the NIIPM (Scientific Research Institute of Plastics) and other research institutes and design offices are reported. The Seminar was opened by A. Ya. Kazhden. Lectures are mentioned: N. A. Grishin on a work conducted jointly with S. S. Voyutskiy and M. M. Gudimov "Weldability of Thermoplasts". I. G. Fedorova on welding of plastics by high-frequency current (20-70Mc/sec) and experience made therewith at the Leningradskiy zavod im. Karla Marksa (Leningrad Plant imeni Karl Marx), Okhtinskiy khimkombinat (Okhta Chemical Combine). Capital investments are paid off within 3-5 months. ✓

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Seminar on Welding of Plastics

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Besides the welding of viniplast also the welding of polyamide, triacetate, and polycaprolactam films, and ftoroplast-3, polyethylene with fillers are dealt with. Z. A. Kogan reported on experience in the welding of polyvinyl chloride films by apparatus ВЧ(-0.4 (VChS-0.4) and ВЧ(-0.2 (VChS-0.2), built by the Nauchno-issledovatel'skiy institut tokov vysokoy chastoty (Scientific Research Institute of High-frequency Currents) and used successfully at the zavod "Dinamo" ("Dinamo" Plant) in Moscow. V. S. Sarychev reported on high-frequency welding of working clothes from plastic films by means of the ДГД-1 (LGD-1) generator, 25-30 Mc/sec, 1 kw. V. V. Chudinov reported on high-frequency welding of floor coverings in industrial buildings from 2-4 mm thick polyvinyl chloride masticated rubber. At a welding rate of 0.5-1 m/min the seam size is 80-85% of the material strength. A traveling apparatus of the type СПП (SPP) and a fixed one, and moreover, a hand-operated СПП (SPP) have been developed for large areas. A. V. Mordvintsev reported on welding of plastics by means of ultrasonics. Machines which are able to weld films up to 10 mm thick have already been designed for this procedure. Bogdashevskiy dealt with the thermal calculation of welding by ultrasonics. N. A. Grishin reported on thermopulse welding. D. V. Mondrus presented a welding

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Seminar on Welding of Plastics

S/191/60/000/010/C17/0:7
B004/B060

apparatus which is heated by means of resistor elements. O. A. Kotovshchikov reported on the mechanized welding of fluoroplastics up to 200 microns thick, and fabric-reinforced plastics up to 300-350 microns thick by means of the MK-4 (MSP-4) machine. The following data are given. rate at a thickness of 40-50 microns, 14-16 m/h; at 200 microns, 4-5 m/h. The maximum strength of the welding joint is 0.2-0.3 kg/cm². The said apparatus was also used to weld Ftorlon (a copolymer containing fluorine) and Copolymer-62. G. Z. Vashin reported on experience gathered by the Derbenevskiy khimzavod (Derbenevskiy Chemical Factory) in welded structures made of plastics. I. A. Nemkovskiy reported on a gas-flame welding apparatus for plastics. ✓

Card 3/3

DZYUBENKO, M.S.; TEMKINA, B.Ya.; MURADOVA, A.A., red.; TORSHINA, Ye.A.,
tekhn. red.

[Protective and decorative coatings on objects of aluminum alloys] Zashchitno-dekorativnye pokrytiya izdelii iz aliuminievykh splavov. Moskva, TSentr.biuro tekhn.informatsii, 1961.
75 p. (MIRA 16:2)

1. Russia (1917- R.S.F.S.R.) Moskovskiy gorodskoy ekonomicheskoy administrativnyy rayon. Sovet narodnogo khozyaystva.
(Aluminum alloys) (Protective coatings)

S/118/61/000/001/005/005
A161/A133

AUTHOR: Temkina, B.Ya.

TITLE: Automation and mechanization of production processes in the chemical industry

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 1, 1961,
60-61

TEXT: The author reports on a seminar on the practical application of automation and mechanization in the chemical industry which was conducted at the Moskovskiy dom nauchno-tekhnicheskoy propagandy (Moscow House of Scientific and Technical Propaganda). N.N. Yelshin, Head of the Automation Department of Goskomitet Soveta Ministrov SSSR po khimii (State Committee for Chemistry of the Council of Ministers of the USSR) reported on the general automation principles in chemical plants and the work to be accomplished of institutes, designers and planners. D.V. Ivanyukov, Director of the Moskovskiy neftepererabatyvayushchiy zavod (The Moscow Petroleum Refinery) described the overall automation at the refinery with the unprecedented application of "agre-

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Automation and mechanization of production ... S/118/61/000/001/005/005
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gatnaya unifitsirovannaya sistema", or "AUS" units (overall standardized system units), with cascade control and the replacement of the many production shops by only three - the technological, raw material, and power department, all controlled from one operator station in the center of the refinery, with five duty dispatcher-operators. The refinery has an experimental cracking plant especially for the checking the joint control system, the dependability and efficiency of automatic controls. The instruments determining the product quality in processes (viscosimeters, refractometers, chromothermographs, analyzers for water content in oil, automatic fractional sublimation plants etc.) have been working successfully for two years and their utilization for other refineries under construction is recommended. I.A. Burovoy, (of Gintsvetmet) treated the automation problems of calcination process in the "boiling layer". The institute has analyzed the basic heat parameters of the process and obtained for the first time equations for the calculation of the interrelations of zinc concentrates and pyrites. Automatic scales have been applied for the dosing of loose humid and slow-drying materials. A.A. Kalitkin, Superintendent of the "КИП" ("KIP") shop of the Shchelkovskiy khimicheskiy zavod (Shchelkovo Chemical Plant) reported on the automation of the drying and adsorption department in the contact apparatus shop, "boiling

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Automation and mechanization of production ...

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layer" furnaces, an experimental kiln for high-temperature calcination of pyrite. V.M. Dobkin (of NIOPIK) reported on the automation of contact processes, i.e. automatic systems with stabilized parameters, and ways for designing optimum control. Ya.A. Shkolovskiy, of a Bashkirian refinery reported that an automation group is working at the refinery. It includes two engineers, two foremen and twenty fitters and instrumentmakers. They do the assembling and setting, make some devices, supervise the operation of new systems, and after testing, put them into service, and train personnel. The group is also working on new control and automation problems. A.V. Korchinskiy and L.A. Kotenko described the work of the TsNIIK laboratory on the automation of ammonia production at the Dneprodzerzhinskiy azotno-tukovyy zavod (Dneprodzerzhinsk Nitrogen Fertilizer Plant) and Stalinogorskiy khimicheskiy kombinat (Stalinogorsk Chemical Combine): the automatic control of ammonia synthesis of coke gas separation, distribution of gaseous ammonia, etc. N.S. Zayarnyy (of GIAP) treated the simulation of the statics of ammonia synthesis reactors with electronic continuous-action computers. This is a new trend in the studies of physical and chemical processes to find the optimum processing conditions. A.A. Tal', of IAT AN SSSR (IAT AS USSR) spoke on the application of pneumatic computers and logic devices in the chemical industry. A pneumatic computer was demonstrated. N.Ya. Parlashkevich, M.N. Luzh-

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Automation and mechanization of production ...

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kov, of NIIPlastmass and others reported on the automation of phenol-formaldehyde resin production at the plastics plant in Nizhniy Tagil. The automation is based on their electric conductivity and viscosity. V.K. Zavgorodniy of the Karacharovskiy (Karacharovo) Plastics Plant reported that several plants (the Karacharovo, "im. Komsomol'skaya pravda", the "Karbolit" in Kemerovo and "Karbolit" in Orekhovo-Zuyevo) have started to utilize high-frequency generators for preheating, and have established semi-automatic control devices for presses. All production processes are automated, from pelleting to packaging of the ready products. I.F. Kozlov told of the development of pneumatic "AUS" system instruments for the automation of chemical production processes, and described three new units of the "cascade" control. The БФ-2 (BF-2) unit produced by NIITeplopribor in cooperation with the "Tizpribor" plant can multiply the values of two pneumatic signals, raise to the second power and extract the square root from the pneumatic signal value. The units have made the "AUS" system more flexible and the cascade system more simple. S.I. Mordovskiy told of automatic control systems for drying units (centrifuges, filters, machines for the treatment of rubber and plastics, evaporators, crystallizers, gas and air compressors, etc.). B.I. Yelagin described the automatic "Mars" machines for recording and signalization. This new sys-

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Automation and mechanization of production ...

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tem is coming into use for the automatic control of chemical processes. A "Mars-200" at the "Krasnyy bogatyr" plant reduced rejects of rubber boots and yielded an annual economy over 300,000 roubles. A.N. Ivanov (of NIISCh-ETMASH) reported on an electronic machine recording automatically the process parameters. One experimental machine is working at the Stalinogorsk Chemical Combine. S.Ya. Rombro (of GIAP) spoke of a "TTY-OM" (PTU-OM) industrial TV set being widely used, whose major drawback is the impossibility of remote-controlling the camera turn and lens setting. The GIAP laboratory has developed a remote-controlled transmitter camera that makes possible the transmission of instrument readings. This is important for work with control objects in dangerous or inaccessible places. GIAP has tele-mechanized the control of power equipment at the Lisichanskiy khimicheskiy kombinat (Lisichansk Chemical Combine). K.S. Furman discussed the applications of nuclear radiations (alpha, beta, gamma, X-ray, neutrons) for the measurement of various process parameters.

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S/117/61/000/005/004/009
A/004/A104

1.1800 also 1087. 1160, 1164

AUTHOR: Temkina, B. Ya.

TITLE: Protective and ornamental coatings of aluminum and its alloys

PERIODICAL: Mashinostroitel', no. 5, 1961, 30 - 34

TEXT: The author gives an extensive description of various methods of applying protective and ornamental coatings to aluminum and its alloys, making use of the materials of a seminar which was taking place in October 1960 at the Moskovskiy dom nauchno-tekhnicheskoy propagandy im. Dzerzhinskogo (Moscow House of Scientific and Technical Propaganda imeni Dzerzhinskiy). Referring in the first place to anodic oxidation of aluminum the author mentions A. V. Shreyder who has developed a system of possible sequences of operation in the preparation of parts for anodic oxidation. Depending on the electrolyte in which the oxide films are formed, the latter are divided into three groups: 1) thin, solid nonporous films utilized in electric capacitors; 2) porous films of 5 - 12 μ thickness used for protective and ornamental purposes, and 3) thick oxidation coatings (30 - 300 μ) whose production method has been developed by N. D. Tomashovyy and M. N. Tyukina at the Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry AS

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USSR). Thick films are very porous, e.g., the porosity of a 100 mm thick film amounts to 20% for aluminum and 35% for the AK-4 alloy. From 1959 to 1960 investigations were carried out at the ENIMS to study the process of thick-layer anodic oxidation of secondary aluminum alloys, e.g., АЛ10В (AL10V), containing a large amount of copper and silicon. It is recommended to treat the parts being anodized in sulfuric acid (180 - 200 g/l) at temperatures in the range of -10 to -5°C at an anode current density of 2.5 - 5 amp/dm². At the Institute of Physical Chemistry investigations were carried out to study the properties and structure of thick-layer anodic coatings on aluminum. The hardness of anodic films is determined by its structure. With an increased dimension of the oxide cells, forming the coating, the microhardness of the film increases. The wear of anodic films decreases with an increased current density. The quality of anodic films on duralumin and silumin can be raised by increasing the sulfuric acid concentration (300-350 g/l) at a temperature of the bath of -7°C. To prevent rejects it is recommended to use combined currents, i. e. superimposing alternating current on direct current. It was found as a result of the investigations that the optimum current densities for the anodizing of duralumin by combined currents are: 5 amp/dm² of a-c and 5 amp/dm² of d-c at a ratio of 1:1. Anodic films of up to 100 - 120 μ thickness and 510 kg/mm² microhardness can be obtained on silumin. M. Ya. Adamova

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and Ye. I. Fridman obtained films up to 150μ thick from sulfuric acid and oxalic acid electrolytes with a minimum relative porosity. Commenting on the technology of electric insulation anodizing the author points out that, in order to obtain high-quality thick films under any anodizing conditions, the anodizing process should be finished before the tension is starting to decrease. In cooled electrolytes at high current densities the film formation process is taking place 5 - 6 times faster than in non-cooled electrolytes. It was found that the upper current density limit in an oxalic acid electrolyte is 4 amp/dm^2 at 2.50°C . The laboratory (Laboratory of Surface Layer Structures) of the Institute of Physical Chemistry AS USSR has been investigating methods of obtaining protective films of aluminum phosphates and chromium phosphates on aluminum and its alloys. The films are degreased, washed, passivated washed again, treated in 0.5% chromium anhydride solution and then dried in air at room temperatures. The phosphating solution is composed of 50 g/l H_3PO_4 , 1.5 - 2.0 g/l KHF_2 and 4-10 g/l CrO_3 . The chromating solution consists of 4-8 g/l CrO_3 (or 1.5-2.0 g/l KHF_2), 1.5 - 2.0 g/l NH_4HF_2 and 0.5 - 1.0 g/l $\text{K}_3\text{Fe}(\text{CN})_6$. The process is taking place at room temperature during 0.5 - 3 minutes. The Scientific Research Institute of Non-Ferrous Metals of the Hungarian People's Republic is developing processes of rapid anodizing to obtain a dependable elastic layer with a good

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breakdown voltage. Baths were used in which the oxidation process does not take more than 45 - 60 minutes, the baths being prepared either on the base of sulfuric acid (2% H_2SO_4 , 3.5% $MgCl_2$) operating on a-c or on the base of organic acids (20% H_2SO_4 , 2 g/l NaCl or 0.5 g/l $MgCl_2$) operating on d-c. Doctor Pal Csokan (Hungarian People's Republic) has developed an original method of coating aluminum with hard and wear-resistant films. The thickest oxidation films were obtained at a voltage of 50 v and a temperature of $1^{\circ}C$. Within 30 minutes it is possible to obtain a coating of 150 - 200 μ thickness. In Hungary a special spray head has been designed to apply the electrolyte to the part by atomization. A film of 2-4 μ thickness forms a stable bond with lacquer and paint coatings. The Moskovskiy furniturnyy zavod (Moscow Accessory Plant) together with the "TsNIIIMshdetal'" Institute has developed a new method of polishing and anodizing small parts which need not be suspended. The installation for the chemical polishing consists of four baths positioned in series in which greasing, chemical polishing and washing in water is effected. The author then describes a process which he calls "ematalirovaniye", which is a process of obtaining dead enamel-like anodic films by introducing into pores of the film immediately during electrolysis the oxides of some metals: titanium, zirconium, thorium. The films treated in such a way are highly corrosion and wear resistant. "Ematalirovaniye" is carried out in an

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electrolyte composed of 1.2 g/l oxalic acid, 8 g/l boric acid, 1 g/l citric acid, 40 g/l oxalic acid titanium-potassium. In the field of enameling good results have been obtained by using lead enamels which possess good fusibility, electric insulation properties and heat-resistance up to 350°C. The Leningradskiy tekhnologicheskii institut imeni Lensovet (Leningrad Technological Institute imeni Lensovet) has developed lead, non-lead, silicate and phosphate enamels for the coating of large-size parts of various configuration. At the Mechanical Engineering Plant in Smela (UkrSSR) an interesting enameling installation with induction heating is used making it possible to automate the enameling process. Galvanizing platings are used to improve the surface of aluminum. The chemical nickel-plating of aluminum and its alloys ensures the operation of parts at temperatures in the range of 200 - 300°C. The author gives a short description of the technology of chemical nickel-plating and points out that this process is taking place at temperatures of 75 - 80°C during 50 - 55 minutes. The author then mentions the electrochemical method of deburring parts of aluminum alloys and points out that already in 1959 investigations were carried out at the ENIMS to find an electrochemical method of deburring parts made of carbon and low-carbon steels. On a special installation cast alloys and alloys being deformed -АЛ-4 (AL-4), АК-4 (AK-4), АЛ-10В (AL-10V) - were tested. The most suitable solutions were found to be sodium chloride and sodium nitrate. To prevent the precipitation of metal

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hydroxides forming during the anodic dissolving it is recommended to add tartaric acid, citric acid or their salts to the solution. The author then describes the process of deep etching which is based on the dissolving of metals in especially selected etching solutions. With this method the metal can be removed either over the whole surface of the part being treated or from individual sections. The process of deep etching consists of the following basic operations: preliminary preparation, application of chemically stable protective coatings to the surface of the part being treated, etching, elimination of the anodic film and final protection from corrosion. There is 1 figure and 1 table. ✓

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PHASE I BOOK EXPLOITATION

SOV/6046

Temkina, Berta Yakovlena

Progressivnaya tekhnologiya nanoseniya gal'vanicheskikh i khimicheskikh pokrytiy
(Advanced Technology of Electrolytic and Chemical Deposition of Coatings), Moscow,
Mashgiz, 1962. 174 p. 11,000 copies printed.

Reviewer: P. L. Faygel'shteyn, Engineer; Ed. of Publishing House: N. P.
Yevstaf'yeva; Tech. Ed.: L. A. Vladimirova; Managing Ed. for Literature
on Chemical and Textile Machine Building: V. I. Rybakova, Engineer.

PURPOSE: This book is intended for engineering personnel of electroplating
shops at machine-building plants.

COVERAGE: The book contains materials reviewed at seminars of MINTP imeni F. E.
Dzerzhinskiy, as well as materials based on the experience of plants. Modern,
most advanced preparatory processes and processes of electrolytic and chemical
deposition of coatings as applied by modern machine-building plants are out-
lined. Information on the equipment, accessories, and auxiliary materials used
in carrying out these processes is given along with a description of specific

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Advanced Technology of Electrolytic (Cont.)

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features of the preparation of metal surfaces for coating, and of the deposition of coatings. No personalities are mentioned. There are 91 references, of which 84 are Soviet, 4 English, 2 Czech, and 1 German.

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TEMKINA, B.Ya., spets. red.; IOFINOVA, TS.B., red.

[Protective-ornamental coatings of household goods]
Zashchitno-dekorativnye pokrytiia izdelii bytovogo
naznacheniiia. Moskva, Gosbytizdat, 1963. 177 p.
(EIRA 17:10)

PHASE I BOOK EXPLOITATION

SOV/6503

Eychis, Andrey Petrovich, and Berta Yakovlevna Temkina.

Tekhnologiya pov rkhnostnoy obrabotki alyuminiya i yego splavov
(Methods of Surface Treatment of Aluminum and its Alloys).
Moscow, Mashgiz, 1963. 253 p. 5200 copies printed.

Reviewer: Z. I. Didyukov, Engineer; Ed.: D. V. Rikberg; Tech.
Ed.: M. S. Gornostaypolskaya; Chief Ed.: Mashgiz (Southern
Dept.): V. K. Serdyuk, Engineer.

PURPOSE: This book is intended for engineering personnel of
coating shops and may also be useful to engineers and designers
engaged in designing metal structures made from aluminum and its
alloys.

COVERAGE: The book describes modern processes of surface treatment
of aluminum and its alloys and various methods of coating
metallic and nonmetallic materials with aluminum. Besides the
procedures of protective and decorative coating, attention is
given in this book to special types of surface treatment such
as chemical milling, thick anodizing, and photochemical etching,

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Methods of Surface Treatment (Cont.)

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which extend the application range of aluminum as a structural and coating material. No personalities are mentioned. There are 99 references 53 Soviet, 31 English, 10 German, 4 French, and 1 Croatian.

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